



ZHENGZHOU



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Butterfly valve
Turbine inlet valve system for hydro-power plant
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Hydraulic actuators/Power station unit/Dismantling joint

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COMPANY PROFILE

Zhengzhou Pump Valve founded in 1995, integrated with R&D, manufacturing, sales and service , leading products including butterfly valve, ball valve, check valve, hydraulic actuator and other types of valves , which are well received and satisfied by the users from domestic and abroad.

Company products are widely used in control and emergency protection turbine, main steam turbine, auxiliary piping systems, pipeline explosion safety control, chemical, desulfurization ,pipeline corrosion engineering and frequency control engineering fields.

With strong technical force , we honored national high-tech enterprises, the State Torch Program, the National Innovation Fund project units .Besides, we are national standard drafting unit of “steam turbine with quick-closing valve” and “hydraulic control valve of inlet turbine”. Up until now, our R&D center acquired more than 20 national patents and software copyright licenses.

There is no best ,only better. We sincerely welcome new and old friends from all walks of life to our company.

CERTIFICATE



Certificate of high and new technological product



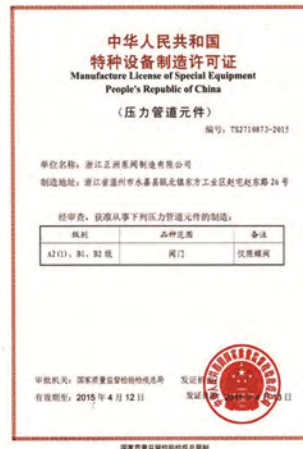
Certificate of science and technology project



ISO9001-2008



ISO14001-2004



Manufacture license for special equipment



OHSAS18001-2007

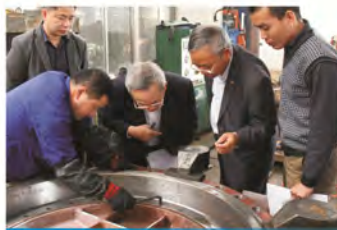
PRODUCTION HIGHLIGHTS



Customer visiting



Photo with customer



Valve checking



skilled worker



customer inspection



Electric wiring



DN600 ball valve



Hydraulic conical valve



Debugging



Integrated semi ball valve



large valve hydraulic system



Pneumatic quick close valve



Accumulator slow closing butterfly valve



DN500 Hemisphere ball valve



Hydraulic butterfly valve with hammer



Counterweight butterfly valve



Butterfly valve



Big size butterfly valve



DN1200 butterfly valve



Electric control cabinet



Hydraulic control actuator



Hydraulic needle valve



Hydraulic power station



Hydraulic pressure keeping butterfly valve

⇒ BUTTERFLY VALVE



Fluid control slow closed butterfly valve is advanced pipeline control equipment installed in the main turbine inlet station; or installed in the pump outlet water, electricity , drainage and other types of pumping station for instead of the check valve and gate valve.

1. Working Principle:

In operation, the valve and the pipe , in accordance with the principle of hydraulic transition process , through an effective set of electro-hydraulic control program , reliable cutoff line , effectively eliminate pipeline water hammer , can achieve without electricity automatically close the valve , protect the pipeline system.

Electrical control box can be integrally mounted with the hydraulic station can also be arranged separately , depending on site conditions choice;



2. Technical Detail

SIZE	Dn150 to DN5000
PRESSURE	PN6 / PN10 / PN16 / PN25 / PN40
MATERIALS	Body: Carbon Steel / Ductile iron/Grey Cast Iron Disc: Carbon Steel / Ductile iron/Grey Cast Iron
SEAT	EPDM / SS
OPERATION TYPE	Hydraulic Actuator
SECTORS	Hydro Power Plants and Dams
APPLICATIONS	Emergency functions for Hydraulic power stations / Turbines, etc...
MEDIUM	Water, sea water, oil etc.
ACCESSORIES	Emergency closing devices, Limit switches, Proximity switches, Solenoid valve, Filters, Emergency System, Junction box, Stem extension, By-pass, Dismantling Joints, Counter-weight with cylinder, Accumulator etc...

3. Open/Close Parameters

DN	<1000		≥1000
Valve open time	10~60s(adjustable)		20~120s(adjustable)
Valve close time	Quick close	1.5~15s(adjustable)	2.5~30s(adjustable)
	Slow close	2.5~60s(adjustable)	6~90s(adjustable)
Valve close degree	Quick close	75°±10°(adjustable)	75°±10°(adjustable)
	Slow close	15°±10°(adjustable)	15°±10°(adjustable)

➔ **WHOLE SET OF HYDRO-POWER VALVE**



1.WORKING PRINCIPLE

Mainly used in large and medium-sized hydro-power stations. Installed before turbine, as main water turbine inlet valve. When turbine or generator needs maintenance, it can be used for cutting off the flow through the valve in the pipeline. Besides, when turbine or generator is abnormal, it can quickly and effectively cut off the flow of water , to prevent accidents.

Intelligent hydraulic control valve with PLC , install manually or with automatic locking device is stable and reliable.



2. TECHNICAL DETAIL

SIZE	Dn500 to DN3000
PRESSURE	PN16 / PN25 / PN40
MATERIALS	Body: Carbon Steel Disc: Carbon Steel
SEAT	Copper alloy/ S.S/ STL
OPERATION TYPE	Hydraulic Actuator
SECTORS	Hydro Power Plants and Dams
APPLICATIONS	Emergency functions for Hydraulic power stations / Turbines, etc...
MEDIUM	Water, sea water, sand water, oil etc.
MEDIUM TEMP.	≤80 °C
COMPONENTS	■ Main butterfly valve(ball valve) ■ Electric control cabinet ■ Both ends connection pipeline ■ air vent valve ■ Hydraulic power station ■ Expansion coupling ■ Bypass system ■ drain valve

Special applications available under request



⇒ PLUNGER VALVE



1. WORKING PRINCIPLE

The Plunger Valves are special type control valves that are designed specifically for variable water flow rates. Unlike Gate and Butterfly Valves, which are mainly used as 'shut-off' type valves, Plunger type Valves are employed when special requirements such as pressure heads and flow rates need to be varied as part of a controlled operation.



2. TECHNICAL DETAIL



SIZE	Dn200 to DN1600
PRESSURE	PN6/PN10/PN16 / PN25
MATERIALS	Body: Carbon Steel/ductile iron/grey cast iron
OPERATION TYPE	Electric / Manual
SECTORS	Hydro Power Plants and Dams
MEDIUM	Water, hot water etc.
	■ Optimized to sewage clogged chute and fouling applications. ■ Automatically adjusted conduit medium parameters preset value , so that it remains constant within a certain precision , accuracy and range . ■ Good resistance to cavitations ■ Integrated electronic circuits , small size, high reliability , high sensitivity & easy installation . ■ Fully closed ,zero leakage ■ Manual control option. ■ Horizontal or vertical installation

➔ **FIXED CONE VALVE**



1. WORKING PRINCIPLE

Fixed cone valves also named hollow Jet valves are mainly used as discharge valve in turbine bypass valves , reservoir or other discharge purpose and can regulate flow also. These valves are used to discharge water at high pressure from reservoirs or full pipes into atmosphere. Some designed valves can also work submerged in the water. A hood can be incorporated at the end of the valve.

With features: simple cone valve structure , low head loss , low flow resistance coefficient , various operation mode, advanced anti-cavitation design and long product life.



2.Main part material

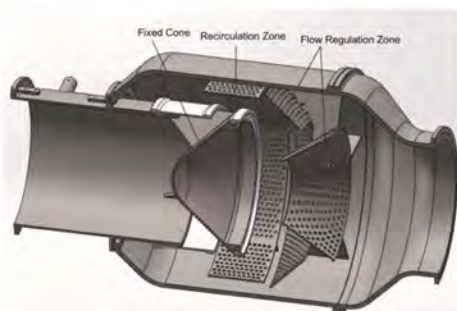
Part name	Material
body	Carbon steel, cast steel, stainless steel
Fixed cone	Carbon steel, cast steel
sleeve	Stainless steel
seat	Stainless steel+NBR
yolk	Carbon steel
Driven rod	Carbon steel, stainless steel
Gear box	Carbon steel

Note: Other materials are available under request.

3.TECHNICAL PARAMETER

Size	DN100-DN2000
Pressure	PN10, PN16, PN25 or larger
Working temperature	-10~80℃
Working position	Long submerged in water
medium	Fresh water
Actuation	Manual, electric actuator, hydraulic

4.How to select?



$$D = \left(\frac{Q_{max}}{C_d (2gH)^{0.5} \Pi} \right)^{0.5}$$

D - Valve Size in mm

Q_{max} - Valve max flow rate m³/s

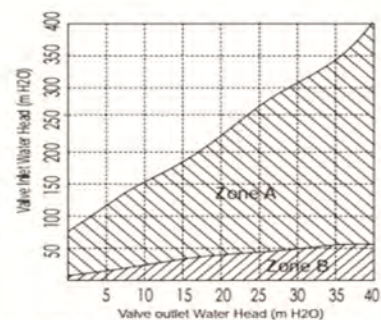
C_d - Flow factor, without hood=0.87, with hood=0.79

g - Acceleration of gravity=9.8m/s²

H - inlet and outlet differential pressure

Π - pi=3.14

To select the right size and design for your application, it's suggested to contact factory to help.



If inlet and outlet water head falls into Zone A, it suggests to use a hood. If falls into Zone B, the hood is optional.

➡ QUICK CLOSE/OPEN VALVE

1.WORKING PRINCIPLE

Quick close (open) valve use pneumatic actuator ,hydraulic actuator and others as energy source. After accepting a pneumatic or electrical signals and other accessories ,together work with travel limit switches, solenoid valves , cylinders and gas control valve can achieve open and fast off operation , and sent passive contact signal indicating the valve 's switch position.

2.Main technical parameter

DN		200mm~2400mm
PN		0.25~10MPa
Pressure test	seat	1.1*PN
	shell	1.5*PN
Medium temperature		≤425℃
medium		Steam, gas etc.
Working pressure		0.8*PN
Opening/Closing time		0.2~0.8s



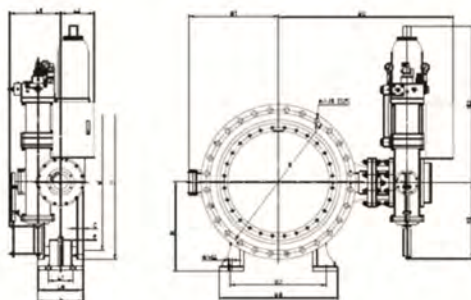
3.Main part material

Part	C	I	P	R
Body	WCB,Q235,Q345	ZG1Cr5Mo,WC6,WC9	CF8(304)	CF8M(316)
disc	WCB,Q235,Q345	ZG1Cr5Mo,WC6,WC9	CF8(304)	CF8M(316)
stem	20Cr13	25Cr2Mo1V	06Cr19Ni10	06Cr17Ni12Mo2
Suitable temperature	-29~425	-29~550	-29~600	

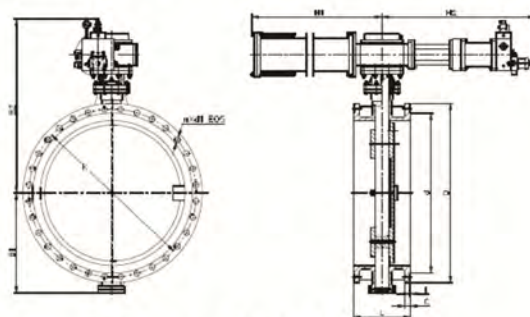
Note: Other materials are available upon request.

4.Structure

This product is mainly composed of valve body , drive unit, the hydraulic control unit , electric control unit and other components.



Accumulator type



Pneumatic actuated Spring type

Double sealed automatic control valve



Size : DN200 ~ Dn3000
 Pressure : PN2.5 ~ Pn40
 Suitable medium : water, sea water , sediment water, oil , etc.
 Material: stainless steel, copper alloys and others
 Valve position transmitter as option, sends 4 ~ 20mA analog valve position signal to a remote controlroom for monitoring.

Hydraulic eccentric hemisphere ball valve



Size: DN50~1400
 Pressure: PN10, PN16, Pn25
 Material: carbon steel, stainless steel etc. Suitable medium: water, sea water, sediment water, oil etc.

Extraction quick closing check valve



Size: DN150~DN1800
 Pressure: PN25 , Pn40
 Suitable medium : water , steam, gas , oil, etc.
 Pneumatic control components mainly Germany FESTO other international brands

Hydraulic conical valve



Hydraulic needle valve is mainly used for the inlet valve of the bypass pipe Hydropower Station. By the governor as a working oil source , control valve opening and closing .

Hydraulic power station



The hydraulic power units are designed and manufactured in accordance with a customer's specifications. Different solutions can be provided from the degree of protection, operating motors etc.

Hydraulic transmission assembly



Composed of oil cylinder, transmission device, auxiliary power supply and travel monitor part etc.

Vacuum break valve



Mainly used for container or pipe , duct or vessel when the system is running or stopped due to a negative pressure or vacuum gradually increased , the valve can automatically open , breaking the vacuum effect, in order to protect the safety of equipment.

Vacuum break valve



Mainly used for container or pipe , duct or vessel when the system is running or stopped due to a negative pressure or vacuum gradually increased , the valve can automatically open , breaking the vacuum effect, in order to protect the safety of equipment.

Flange Adaptor



Size: DN40~600
Pressure: PN10, PN16
Main material: Duct iron
Gasket: EPDM/NBR

Dismantling Joint



Size: DN150~DN5500
Pressure : PN10, PN16, PN25, PN40, PN64
Main material ductile iron or carbon steel
Suitable temperature: -10-120°C

Electric Control Cabinet



The electrical control panels are designed and manufactured to suit a client's required specifications: different solutions can be provided ranging from the degree of protection, operating voltage and specific requests for single components such as relays for example.

Stem extension butterfly valve



Stem extensions designed for valves located areas are inaccessible or buried. They provide a direct connection between the actual valve stem and the relocated valve handle.

Material: Carbon steel, SS304 or SS316 single piece stem extensions

Triple eccentric metal seal butterfly valve



Size: 1/2"~56"
 Pressure: 150Lb~2500Lb
 Material: WCB, Stainless steel, Cast iron, Alloy
 Design standard: API6D, API600, ASMEB16.34
 Test standard: API6D, API598

pneumatic ball valve



Size: DN50~600
 Pressure: PN16/25/40
 Body material: WCB, stainless steel (CF8, CF8M, CF3, CF3M)

Wafer pneumatic butterfly valve



Size: DN50~DN800
 Pressure: PN6/PN10
 Operation mode: pneumatic, electric, manual, worm gear
 Medium: Water, salt, acid, alkali, nature gas, air, alcohols, oils, etc

Gate valve



Size : DN15~DN600mm (1/2"-24")
 Pressure : PN1.0~10MPa (150lb-900lb)
 Suitable Mediums: water , oil , gas, steam
 Materials: Cast steel / Ductile cast iron / cast iron / stainless steel 304/316

Globe valve



Size: 2"~24"
 Pressure: 150lb, 300lb, 600lb
 Design and manufacturer: API600
 Flange: ASME B16.5
 Testing and checking: API598

Check valve



Size: 1/2"-12"
 Pressure: 150-600lbs
 Applicable temperature range: -200-350°C
 Material: WCB/304/316
 Applicable medium: nitric, acetic acid, water, oil, gas and some corrosive liquids

Pressure Reducing Valve



Size: DN50~DN600

Pressure: PN10/PN16/PN25

Applicable for living water supply, fire-fighting system and industrial water supply system, which can adjust and control the main valve outlet pressure, which will not be changed along with the inlet pressure as well as the variation of the main valve outlet flow.

Float water control Valve



Size: DN40~DN300

Pressure: PN10/PN16/PN25

Material: Brass, Ductile Iron

Normal working temp $\leq 80^{\circ}\text{C}$

Working medium water, air, Low corrosion fluid

Micro resistance slow close check valve



Size: DN50 ~ 800

Pressure: PN10/PN25

Medium Temperature $\leq 80^{\circ}\text{C}$

Working Medium Water

Air release valve



Size: 2"~10" with flanged ends to meet any requested standard.

Materials: Body and cover made of Ductile Iron.

Wafer check valve



Size: DN40-1000

Pressure: PN10/PN16

Medium: water, gas, oil, etc

Y type strainer



Size: DN15-DN500

Pressure: N10, PN16

Material: ductile iron GGG50/GGG40

Surface treatment: Epoxy Internal and external, paint coated

OUR CLIENTS



AFTER-SALE SERVICE



‘After Sales Service’ is always essential in the whole workflow. Our ‘After Sales Department’ continuously focus on providing comprehensive support to both new and old customers.



INTERNATIONAL BUSSINESS

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